

SEQUENCE LISTING

<110> Cedars-Sinai Medical Center

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<120> Mutations in NOD2 are Associated with
Fibrostenosing Disease in Patients with Crohn's Disease

<130> 66783-138

<150> US 60/407,391

<151> 2002-08-30

<150> US 10/356,736

<151> 2003-01-30

<160> 67

<170> FastSEQ for Windows Version 4.0

<210> 1

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<213> Homo sapiens

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ggcggcccgt ggccctgcag ctggactaca actctgtggg tgacattggc ctggagcagc 420
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aggtatgggg gagc 494
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<213> Homo sapiens

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cacactgcaa aatgtcaact tgaggtgcc aacattcagg ccacgtgcag ccttccgagc 240
cagccgctcc tctgcactct cgtacaggct ccgatgagc cagatgaacc cgggcatggc 300
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atgcacgctc ttggcctcac ccggtgcagc tggcgggatg gagtggaagt gcttgcgagg 360
gctgcggggc agacaccagc gggcacaggc ctggcgccgg agcagggcct tctcagatgt 420
ctggcactca gccagcaggc cccagtgtct ccgggacaac agccctgcc a ggaaggctgc 480
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<212> DNA

<213> Homo sapiens

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aaagttcaaa gaccttcaga actggcccca gctcctccct cttcacctga tctccccaag 180
aaaactgcag gatagactct gaagcttacc tgagccacct caagctctgg tgatcaccca 240
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aacagtctct ctccctctgc agtcccagcc agagggggcag gaccactcaa tcccagagtg 420
gcctcactgg ggctcctggg cccagcaaag tggacctgcc tccatctttt ggggtgggatg 480
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<210> 4

<211> 540

<212> DNA

<213> Homo sapiens

<400> 4

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cactctggga ttgagtgggc ctgcccctct ggctgggact gcagagggag gaggactgtt 180
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atctctaccc cacaatgtta ggcaatggag taaggaaaaa agaccattgg atttcaagag 480
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<210> 5

<211> 541

<212> DNA

<213> Homo sapiens

<400> 5

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aatcagatcc ttcacatgca gaatcattct cactgaatgt cagaatcaga agggatcctc 120
aaaattctgc cattcctctc tcccgtcacc ccattttaca gatagaaaaa ctgaggttcg 180
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ctgctcatgt ctgagattcc caatgagctc atcaacaaag gctcagtacc atcagtgaag 480
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 ggatgtgtct aagggacagg tgggcttcag tagactggct aactcctgca gtctctttaa 180
 ctggacagtt tcaagaggaa aaccaagaat ccttgaagct caccattgta tcttcttttc 240
 caggttgtcc aataactgca tcacctacct aggggcagaa gccctcctgc aggcccttg 300
 aaaggaatga caccatcctg gaagtctggt aagggccctg ggcaggcctg ttttagctct 360
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 tgaggatccc ttctgattct gacattcagt gagaatgatt ctgcatgtga aggatctgat 480
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<210> 7
 <211> 540
 <212> DNA
 <213> Homo sapiens

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 gcaagtgcag ccgctgcagg agcgtgctct tgccactgcc cgcctcacc accaccagca 180
 cagtgtccgc atcgtcattg aggtggccag gggtagctgaa gagctcctcc aggccaggg 240
 tggctgggct cttctgcggg ggtccagcca tgcccacatc tgcccagacc tccaggacat 300
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 gagactgagc agacaccgtg gtctctcagct tggccatata cttcttgcat gtggcagctg 420
 gaaggcagaa gaagaggcag atgaaggtgg caccatgggtg aagacgggac ctaaccagac 480
 aatgggctgc tgcgggggac gctgacataa ctgaagggat aggagagcca gcgggagccc 540

<210> 8
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 <212> DNA
 <213> Homo sapiens

<400> 8
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 cagctgccac atgcaagaag tatatggcca agctgaggac cacgggtgtct gctcagtctc 180
 gcttctcag tacctatgat ggagcagaga cgctctgcct ggaggacata tacacagaga 240
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 ccttgggcct ggaggagctc ttcagcacc ctggccacct caatgacgat gcggacactg 360
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 tgtgggctgc agggcaagac ttccaggaat ttctctttgt cttccattc agctgccggc 480
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<210> 9
 <211> 520
 <212> DNA

<213> Homo sapiens

<400> 9

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cagcccaata tcttcaattt acagatactg tatcaaaacc ctgagaggac aaggacatt 120
tccaagtcac ccagaaagac tcgagtgtcc tctcttgaaa tccaatggtc ttttttcctt 180
actccattgc ctaacattgt ggggtagaaa taaagttcaa agaccttcag aactggcccc 240
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tcacccactc tggtgcccc gaacttgaaa aggccaaaag agtcaacaga cagtgtcagt 420
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<210> 10

<211> 520

<212> DNA

<213> Homo sapiens

<400> 10

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cttttggcct tttcagattc tggggcaaca gagtgggtga cgagggggcc caggccctgg 180
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tgcagttttc ttggggagat caggtgaaga gggaggagct ggggccagtt ctgaaggtct 300
ttgaacttta tttctacccc acaatgttag gcaatggagt aaggaaaaaa gaccattgga 360
tttcaagaga ggacactcga gtctttctgg gtgacttgga aatgtccctt gtccctctcag 420
ggttttgata cagtatctgt aaattgaaga tattgggctg gatcaggtag attttatctt 480
aaggaccaat tccaatccat tggtagtggg tgcccagtag 520
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<210> 11

<211> 535

<212> DNA

<213> Homo sapiens

<400> 11

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ggccaagagc aaatgctttg cttaagtgtc gaaatctcag cccactgacc ccttgagac 480
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<210> 12

<211> 496

<212> DNA

<213> Homo sapiens

<400> 12

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tattacctgg tcgggcttcc cctcttcagg cgaaatctgt cagtctatct gcattgcctt 180
ttgatctcta cttcagttac tacmaactta aagacaccat tgtcctcccc aaggtagags 240
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ccatgtagag aaaggatcac ttcttctgtg aaagagaggg tcaaggggtg acccacgtgg 300
gccctccctg aaaccaggc ccaggcctga gcctggacac ctcttcctt cctgagacca 360
cagccagccc ggtttctctg gggccaagag caaatgcttt gcttaagtgc tgaaatctca 420
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<210> 13

<211> 488

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 434

<223> n = A,T,C or G

<400> 13

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ccggtttctc tggggccaag agcaaagct ttgcttaagt gctgaaatct cagccactg 420
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agtctctg 488

<210> 14

<211> 491

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 437

<223> n = A,T,C or G

<400> 14

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cctggtcggg cttccctctc tcaggcgaaa tctgtcagtc tatctgcatt gccttttgat 180
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agcccggttt ctctggggcc aagagcaaat gctttgctta agtgctgaaa tctcagccca 420
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ctgagtctct g 491

<210> 15

<211> 491

<212> DNA

<213> Homo sapiens

<400> 15

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cctggtcggg cttccctctc tcaggcgaaa tctgtcagtc tatctgcatt gccttttgat 180
ctctacttca gttactacaa cttcaaagac accattgtcc tccccagggt gaggcccatg 240
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agcccggttt ctctggggcc aagagcaa atgtgtgctta agtgctgaaa tctcagccca 420
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<210> 16

<211> 491

<212> DNA

<213> Homo sapiens

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<223> n = A,T,C or G

<400> 16

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ttcactcatt atctgtttcc taaaattgtc cttaacatcc ttctctttac tccttttatta 120
cctggtcggg cttccctctc tcaggcgaaa tctgtcagtc tatctgcatt gccttttgat 180
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ctgagtctct g 491
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<210> 17

<211> 491

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 159

<223> n = A,T,C or G

<400> 17

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ttcactcatt atctgtttcc taaaattgtc cttaacatcc ttctctttac tccttttatta 120
cctggtcggg cttccctctc tcaggcgaaa tctgtcagtc tatctgcatt gccttttgat 180
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agcccggttt ctctggggcc aagagcaa atgtgtgctta agtgctgaaa tctcagccca 420
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ctgagtctct g 491
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<210> 18

<211> 487

<212> DNA

<213> Homo sapiens

<220>

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<222> 433

<223> n = A,T,C or G

<400> 18

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ctyattatct gtttctctaaa attgtcctta acatccttcc tcttactcct ttattacctg 120
gtcgggcttc ccctcttcag gcgaaatctg tcagtctatc tgcattgcct tttgatctct 180
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<210> 19

<211> 486

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 432

<223> n = A,T,C or G

<400> 19

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tcgggcttcc cctcttcagg cgaaatctgt cagtctatct gcattgcctt ttgatctcta 180
cttcagttac tacaacttca aagacaccat tgtcctcccc aaggtgaggc ccatgtagag 240
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ggtttctctg gggccaagag caaatgcttt gcttaagtgc tgaaatctca gccactgac 420
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tctctg 486
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<210> 20

<211> 484

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 430

<223> n = A,T,C or G

<400> 20

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gggcttcccc tcttcaggcg aaatctgtca gtctatctgc attgcctttt gatctctact 180
tcagttacta caacttcaaaa gacaccattg tcctcccaa ggtgaggccc atgtagagaa 240
aggatcactt ccttgctgaa agagaggggc aaggggagac ccacgtgggc cctccctgaa 300
accaggcccc aggcctgagc ctggacacct ccttctctcc tgagaccaca gccagcccgg 360
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tttctctggg gccaaagacg aatgctttgc ttaagtgtg aaatctcagc ccactgaccc 420
cttgagacn ggagaggagg ggaagcccag ggaagctcaa cttcccaagt gtcctgagtc 480
tctg                                         484

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<210> 21
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<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> 431
<223> n = A,T,C or G

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<400> 21
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cggtcttccc ctcttcaggc gaaatctgtc agtctatctg cattgccttt tgatctctac 180
ttcagttact acaacttcaa agacaccatt gtcctcccca aggtgaggcc catgtagaga 240
aaggatcact tccttgctga aagagagggt caaggggcga cccacgtggg ccctccctga 300
aaccagggcc caggcctgag cctggacacc tccttccttc ctgagaccac agccagcccg 360
gtttctctgg ggccaagagc aaatgctttg cttaagtgtc gaaatctcag cccactgacc 420
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ctctg                                         485

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<210> 22
<211> 488
<212> DNA
<213> Homo sapiens

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<220>
<221> misc_feature
<222> 434
<223> n = A,T,C or G

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<400> 22
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ggtcgggctt cccctcttca ggcgaaatct gtcagtctat ctgcattgcc ttttgatctc 180
tacttcagtt actacaactt caaagacacc attgtcctcc ccaagggtgag gcccatgtag 240
agaaaggatc acttccttgc tgaaagagag ggtcaagggg cgacccacgt gggccctccc 300
tgaaacccag gcccaggcct gagcctggac acctccttcc ttctgagac cacagccagc 360
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agtctctg                                         488

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<210> 23
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<212> DNA
<213> Homo sapiens

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<220>
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<223> n = A,T,C or G

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<400> 23

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ggctgggctt cccctcttca ggcgaaatct gtcagtctat ctgcattgcc ttttgatctc 180
tacttcagtt actacaactt caaagacacc attgtcctcc ccaagggtgag gcccatgtag 240
agaaaggatc acttccttgc tgaaagagag ggtcaagggg cgacccacgt gggccctccc 300
tgaaaccag gccaggcct gagcctggac acctccttcc ttcctgagac cacagccagc 360
ccggtttctc tggggccaag agcaaagct ttgcttaagt gctgaaatct cagcccactg 420
accccttgca gacnggagag gaggggaagc ccaggggaagc tcaacttccc aagtgtcctg 480
agtctctg                                     488

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<210> 24

<211> 497

<212> DNA

<213> Homo sapiens

<400> 24

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tcactaggct tctggttgat gcctgtgaac tgaactctga caacagactt ctgaaataga 60
cccacaagag gcagttccat ttcatttctg ccagaatgct ttaggatgta cagttatgga 120
ttgaaagttt acaggaaaaa aaattaggcc gttccttcaa agcaaagtgc ttcctggatt 180
attcaaaatg atgtatgttg aagcctttgt aaattgtcag atgctgtgca aatgttatta 240
ttttaaacat tatgatgtgt gaaaactggg taatatttat aggtcacttt gttttactgt 300
cttaagttta tactcttata gacaacatgg ccgtgaactt tatgctgtaa ataatcagag 360
gggaataaac tggttgagtca aaacagccat cttccttctg accaaacatt taaaaatatt 420
ctggctgggc acagtggctc acgcctgtaa tcccagcact ttggggaggc gaggtgggca 480
gatcacctga ggttggg                                     497

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<210> 25

<211> 460

<212> DNA

<213> Homo sapiens

<400> 25

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tgacaacaga cttctgaaat agaccacaa gaggcagttc catttcattt gtgccagaat 60
gctttaggat gtacagttat ggattgaaag tttacaggaa aaaaaattag gccgttcctt 120
caaagcaaat gtcttcctgg attattcaaa atgatgtatg ttgaagcctt tgtaaattgt 180
cagatgctgt gcaaagtgtt ttatttttaa cattatgatg tgtgaaaact ggtaaatatt 240
tataggtcac tttgttttac tgtcttaagt ttatactctt atagacaaca tggccgtgaa 300
ctttatgctg taaataatca gaggggaata aactgttgag tcaaaacagc catcttcctt 360
gtgaccaaac atttaaaaat attctggtg ggcacagtgg ctcacgcctg taatcccagc 420
actttgggag gccgaggtgg gcagatcacc tgaggttggg                                     460

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<210> 26

<211> 462

<212> DNA

<213> Homo sapiens

<400> 26

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tctgacaaca gacttctgaa atagaccac aagaggcagt tccatttcatt ttgtgccaga 60
atgctttagg atgtacagtt atggattgaa agtttacagg aaaaaaatt aggcggttcc 120
ttcaaagcaa atgtcttcct ggattattca aaatgatgta tgttgagcc tttgtaaatt 180
gtcagatgct gtgcaaagt tattatttta aacattatga tgtgtgaaaa ctggttaata 240
tttataggtc actttgtttt actgtcttaa gtttatactc ttatagacaa catggccgtg 300
aactttatgc tgtaataaat cagaggggaa taaactgttg agtcaaaaca gccatcttcc 360

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ttgtgaccaa acattttaaa atattctggc tgggcacagt ggctcacgcc tgtaatccca 420
gcactttggg aggccgaggt gggcagatca cctgaggttg gg 462

<210> 27

<211> 459

<212> DNA

<213> Homo sapiens

<400> 27

gacaacagac ttctgaaata gaccacaag aggcagttcc atttcatttg tgccagaatg 60
ctttaggatg tacagttatg gattgaaagt ttacaggaaa aaaaattagg ccgttccttc 120
aaagcaaatg tcttcctgga ttattcaaaa tgatgtatgt tgaagccttt gttaaattgtc 180
agatgctgtg caaatgttat tattttaaac attatgatgt gtgaaaactg gttaatatatt 240
ataggtcact ttgttttact gtcttaagtt tatactctta tagacaacat ggccgtgaac 300
tttatgctgt aaataatcag aggggaataa actgttgagt caaaacagcc atcttccttg 360
tgaccaaaca tttaaaaata ttctggctgg gcacagtggc tcacgcctgt aatcccagca 420
ctttgggagg ccgaggtggg cagatcacct gaggttggg 459

<210> 28

<211> 467

<212> DNA

<213> Homo sapiens

<400> 28

tgaactctga caacagactt ctgaaataga cccacaagag gcagttccat ttcattttgtg 60
ccagaatgct ttaggatgta cagttatgga ttgaaagttt acaggaaaaa aaattaggcc 120
gttccttcaa agcaaatgtc ttcctggatt attcaaaatg atgtatgttg aagcctttgt 180
aaattgtcag atgctgtgca aatgttatta ttttaaacat tatgatgtgt gaaaactggg 240
taatatttat aggtcacttt gttttactgt cttaagttta tactcttata gacaacatgg 300
ccgtgaactt tatgctgtaa ataatcagag gggaataaac tgttgagtca aaacagccat 360
cttccttggtg accaaacatt taaaaatatt ctggctgggc acagtggctc acgcctgtaa 420
tcccagcact ttgggaggcc gaggtgggca gatcacctga ggttggg 467

<210> 29

<211> 467

<212> DNA

<213> Homo sapiens

<400> 29

tgaactctga caacagactt ctgaaataga cccacaagag gcagttccat ttcattttgtg 60
ccagaatgct ttaggatgta cagttatgga ttgaaagttt acaggaaaaa aaattaggcc 120
gttccttcaa agcaaatgtc ttcctggatt attcaaaatg atgtatgttg aagcctttgt 180
aaattgtcag atgctgtgca aatgttatta ttttaaacat tatgatgtgt gaaaactggg 240
taatatttat agrtcacttt gttttactgt cttaagttta tactcttata gacaacatgg 300
ccgtgaactt tatgctgtaa ataatcagag gggaataaac tgttgagtca aaacagccat 360
cttccttggtg accaaacatt taaaaatatt ctggctgggc acagtggctc acgcctgtaa 420
tcccagcact ttgggaggcc gaggtgggca gatcacctga ggttggg 467

<210> 30

<211> 466

<212> DNA

<213> Homo sapiens

<400> 30

gaactatgac aacagacttc tgaaatagac ccacaagagg cagttccatt tcattttgtgc 60

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cagaatgctt taggatgtac agttatggat tgaaagttta caggaaaaaa aattaggccg 120
ttccttcaaa gcaaatgtct tcctggatta ttcaaaatga tgtatgttga agcctttgta 180
aattgtcaga tgctgtgcaa atgttattat tttaaacatt atgatgtgtg aaaactgggt 240
aatatttata grtcactttg ttttactgtc ttaagtttat actcttatag acaacatggc 300
cgtgaacttt atgctgtaaa taatcagagg ggaataaact gttgagtcaa aacagccatc 360
ttccttgtga ccaaacattt aaaaatattc tggctgggca cagtggctca cgcctgtaat 420
cccagcactt tgggaggccg aggtgggcag atcacctgag gttggg 466

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<210> 31

<211> 466

<212> DNA

<213> Homo sapiens

<400> 31

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gaactctgac aacagacttc tgaaatagac ccacaagagg cagttccatt tcatttgtgc 60
cagaatgctt taggatgtac agttatggat tgaaagttta caggaaaaaa aattaggccg 120
ttccttcaaa gcaaatgtct tcctggatta ttcaaaatga tgtatgttga agcctttgta 180
aattgtcaga tgctgtgcaa atgttattat tttaaacatt atgatgtgtg aaaactgggt 240
aatatttata grtcactttg ttttactgtc ttaagtttat actcttatag acaacatggc 300
cgtgaacttt atgctgtaaa taatcagagg ggaataaact gttgagtcaa aacagccatc 360
ttccttgtga ccaaacattt aaaaatattc tggctgggca cagtggctca cgcctgtaat 420
cccagcactt tgggaggccg aggtgggcag atcacctgag gttggg 466

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<210> 32

<211> 460

<212> DNA

<213> Homo sapiens

<400> 32

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tgacaacaga cttctgaaat agaccacaa gaggcagttc catttcattt gtgccagaat 60
gctttaggat gtacagttat ggattgaaag tttacaggaa aaaaaattag gccgttcctt 120
caaagcaaat gtcttcctgg attattcaaa atgatgtatg ttgaagcctt tgtaaattgt 180
cagatgctgt gcaaatgtta ttattttaaa cattatgatg tgtgaaaact ggtaaatatt 240
tatagrtcac tttgttttac tgtcttaagt ttatactctt atagacaaca tggccgtgaa 300
ctttatgctg taaataatca gaggggaata aactgttgag tcaaaacagc catcttcctt 360
gtgaccaaac atttaaaaat attctggctg ggcacagtgg ctacgcctg taatcccagc 420
actttggggag gccgaggtgg gcagatcacc tgaggttggg 460

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<210> 33

<211> 467

<212> DNA

<213> Homo sapiens

<400> 33

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tgaactctga caacagactt ctgaaataga ccacaagagg gcagttccat ttcatttgtg 60
ccagaatgct ttaggatgta cagttatgga ttgaaagttt acaggaaaaa aaattaggcc 120
gttccttcaa agcaaatgtc tcctggatt attcaaaatg atgtatgttg aagcctttgt 180
aaattgtcag atgctgtgca aatgttatta ttttaaacat tatgatgtgt gaaaactggg 240
taatatttat aggtcacttt gttttactgt cttaagttta tactcttata gacaacatgg 300
ccgtgaactt tatgctgtaa ataatcagag gggaataaac tgttgagtca aaacagccat 360
cttccttgtg accaaacatt taaaaatatt ctggctgggc acagtggctc acgcctgtaa 420
tcccagcact tgggaggccg gaggtgggca gatcacctga ggttggg 467

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<210> 34

<211> 460

<212> DNA
<213> Homo sapiens

<400> 34
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gcttttaggat gtacagttat ggattgaaag ttacaggaa aaaaaattag gccgttcctt 120
caaagcaaat gtcttcctgg attattcaaa atgatgtatg ttgaagcctt tgtaaattgt 180
cagatgctgt gcaaatgtta ttattttaaa cattatgatg tgtgaaaact gggttaattt 240
tatagatcac tttgttttac tgtcttaagt ttatactctt atagacaaca tggccgtgaa 300
ctttatgctg taaataatca gaggggaata aactgttgag tcaaaacagc catcttcctt 360
gtgaccaaac atttataaat attctggctg ggcacagtgg ctcacgcctg taatcccagc 420
actttgggag gccgaggtgg gcagatcacc tgaggttggg 460

<210> 35
<211> 462
<212> DNA
<213> Homo sapiens

<400> 35
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atgcttttagg atgtacagtt atggattgaa agtttacagg aaaaaaatt aggccgttcc 120
ttcaaagcaa atgtcttcct ggattattca aaatgatgta tgttgaagcc tttgtaaatt 180
gtcagatgct gtgcaaatgt tattatttta aacattatga tgtgtgaaaa ctgggttaata 240
tttatagatc actttgtttt actgtcttaa gtttatactc ttatagacaa catggccgtg 300
aactttatgc tgtaaataat cagaggggaa taaactgttg agtcaaaaca gccatcttcc 360
ttgtgacca acatttataa atattctggc tgggcacagt ggctcacgcc tgtaatccca 420
gcactttggg aggccgaggt gggcagatca cctgaggttg gg 462

<210> 36
<211> 463
<212> DNA
<213> Homo sapiens

<400> 36
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aatgcttttag gatgtacagt tatggattga aagtttacag gaaaaaaat taggccgttc 120
cttcaaagca aatgtcttcc tggattattc aaaatgatgt atgttgaagc ctttgtaaat 180
tgtcagatgc tgtgcaaatg ttattatttt aaacattatg atgtgtgaaa actgggttaat 240
atttatagrt cactttgttt tactgtctta agtttatact cttatagaca acatggccgt 300
gaactttatg ctgtaaataa tcagagggga ataaactgtt gagtcaaaac agccatcttc 360
cttgtgacca aacattttaa aatattctgg ctgggcacag tggctcacgc ctgtaatccc 420
agcacttttg gaggccgagg tgggcagatc acctgaggtt ggg 463

<210> 37
<211> 17
<212> DNA
<213> Homo sapiens

<400> 37
ggtggctggg ctcttct

17

<210> 38
<211> 24
<212> DNA
<213> Homo sapiens

<400> 38
ctcgcttcct cagtacctat gatg 24

<210> 39
<211> 21
<212> DNA
<213> Homo sapiens

<400> 39
ctggctgagt gccagacatc t 21

<210> 40
<211> 17
<212> DNA
<213> Homo sapiens

<400> 40
ggcgggatgg agtggaa 17

<210> 41
<211> 21
<212> DNA
<213> Homo sapiens

<400> 41
ccacctcaag ctctggtgat c 21

<210> 42
<211> 23
<212> DNA
<213> Homo sapiens

<400> 42
gttgactctt ttggcctttt cag 23

<210> 43
<211> 23
<212> DNA
<213> Homo sapiens

<400> 43
ccttaccaga cttccaggat ggt 23

<210> 44
<211> 25
<212> DNA
<213> Homo sapiens

<400> 44
tgtccaataa ctgcatcacc tacct 25

<210> 45
<211> 13
<212> DNA

<213> Homo sapiens

<400> 45

catggctgga ccc

13

<210> 46

<211> 13

<212> DNA

<213> Homo sapiens

<400> 46

catggctgga tcc

13

<210> 47

<211> 13

<212> DNA

<213> Homo sapiens

<400> 47

tgctccggcg cca

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<210> 48

<211> 14

<212> DNA

<213> Homo sapiens

<400> 48

ctgctctggc gcc

14

<210> 49

<211> 16

<212> DNA

<213> Homo sapiens

<400> 49

ctctgttgcc ccagaa

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<210> 50

<211> 15

<212> DNA

<213> Homo sapiens

<400> 50

ctctgttgcg ccaga

15

<210> 51

<211> 15

<212> DNA

<213> Homo sapiens

<400> 51

ctttcaaggg cctgc

15

<210> 52

<211> 15

<212> DNA
 <213> Homo sapiens

<400> 52
 cctttcaagg ggcct 15

<210> 53
 <211> 16
 <212> DNA
 <213> Homo sapiens

<400> 53
 aagactcgag tgcct 16

<210> 54
 <211> 16
 <212> DNA
 <213> Homo sapiens

<400> 54
 agactcaagt gtcctc 16

<210> 55
 <211> 533
 <212> DNA
 <213> Homo sapiens

<400> 55
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 tgttggcagc ctcttcaaaa tgagccctgt cctgcctaag gctgaacttg ttttctggga 120
 acaccatagg tcacctttat tctggcagag gaggagcat cagtgcctc caggatagac 180
 ttttcccaag cctacttttg ccattgactt ctcccaaga ttcaatcca ggatgtacaa 240
 ggacagcccc tctccatag tatgggactg gcctctgctg atcctcccag gcttccgtgt 300
 ggggtcagtgg ggcccatgga tgtgcttgtt aactgagtgc cttttggtgg agaggcccg 360
 cctctcacia aagacctt accactgctc tgatgaagag gactacacag aacacataat 420
 tcaggaagca gctttccca tgtctcgact catccatcca ggccattccc cgtctctggt 480
 tctccctc ctctggact cctgcacacg ctcttctc tgaggctgaa att 533

<210> 56
 <211> 497
 <212> DNA
 <213> Homo sapiens

<400> 56
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 taaggctgaa cttgttttct gggaacacca taggtcacct ttattctggc agaggaggga 120
 gcatcagtgc cctccaggat agacttttcc caagcctact ttgccattg acttcttccc 180
 aagattcaat cccaggatgt acaaggacag cccctcctcc atagtatggg actggcctct 240
 gctgatectc ccaggcttcc gtgtgggtca gtggggccca tggatgtgct tgtaaactga 300
 gtgccttttg gtggagaggc ccggcctctc aaaaaagacc ccttaccact gctctgatga 360
 agaggagtac acagaacaca taattcagga agcagctttc cccatgtctc gactcatcca 420
 tccaggccat tccccgtctc tggttcctcc cctcctcctg gactcctgca cacgctcctt 480
 cctctgaggc tgaaatt 497

<210> 57

<211> 497
<212> DNA
<213> Homo sapiens

<400> 57
gggccccaga ggctgggtga catgtgttgg aagcctcttc aaaatgagcc ctgtcctgcc 60
taaggetgaa cttgttttct gggaacacca taggtcacct ttattctggc agaggagggga 120
gcatcagtgc cctccaggat agacttttcc caagcctact ttggccattg acttcttccc 180
aagattcaat cccaggatgt acaaggacag cccctcctcc atagtatggg actggcctct 240
gctgacccctc ccaggcttcc gtgtgggtca gtggggccca tggatgtgct tgttaactga 300
gtgccttttg gtggagaggg ccggcctctc acaaaagacc ccttaccact gctctgatga 360
agaggagtac acagaacaca taattcagga agcagctttc cccatgtctc gactcatcca 420
tccaggccat tccccgtctc tgggtccctc cctcctcctg gactcctgca cacgctcctt 480
cctctgaggg tgaaatt 497

<210> 58
<211> 497
<212> DNA
<213> Homo sapiens

<400> 58
gggccccaga ggctgggtga catgtgttgg cagcctcttc aaaatgagcc ctgtcctgcc 60
taaggetgaa cttgttttct gggaacacca taggtcacct ttattctggc agaggagggga 120
gcatcagtgc cctccaggat agacttttcc caagcctact ttggccattg acttcttccc 180
aagattcaat cccaggatgt acaaggacag cccctcctcc atagtatggg actggcctct 240
gctgacccctc ccaggcttcc gtgtgggtca gtggggccca tggatgtgct tgttaactga 300
gtgccttttg gtggagaggg ccggcctctc acaaaagacc ccttaccact gctctgatga 360
agaggagtac acagaacaca taattcagga agcagctttc cccatgtctc gactcatcca 420
tccaggccat tccccgtctc tgggtccctc cctcctcctg gactcctgca cacgctcctt 480
cctctgaggg tgaaatt 497

<210> 59
<211> 483
<212> DNA
<213> Homo sapiens

<400> 59
gggtgacatg tgttggcagc ctcttcaaaa tgagccctgt cctgcctaag gctgaacttg 60
ttttctggga acaccatagg tcacctttat tctggcagag gagggagcat cagtgccttc 120
caggatagac ttttcccaag cctacttttg ccattgactt ctccccaaga ttcaatccca 180
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gcttccgtgt gggtcagtgg ggcccatgga tgtgcttgtt aactgagtgc cttttggtgg 300
agaggcccg cctctcacia aagaccctt accactgctc tgatgaagag gactacacag 360
aacacmtaat tcaggaagca gctttcccca tgtctcgact catccatcca ggccattccc 420
cgtctctggt tcttccctc ctctggact cctgcacacg ctcccttctc tgaggctgaa 480
att 483

<210> 60
<211> 500
<212> DNA
<213> Homo sapiens

<400> 60
tttgggcccc agaggctggg tgacatgtgt tggcagcctc ttcaaaatga gccctgtcct 60
gcctaaggct gaacttgttt tctgggaaca ccataggtca cctttattct ggagagggag 120


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ggagcatcag  tgccctccag  gatagacttt  tcccaagcct  acttttgcca  ttgacttctt  180
cccaagattc  aatcccagga  tgtacaagga  cagccctcc  tccatagtat  gggactggcc  240
tctgtctgac  ctcccaggct  tccgtgtggg  tcagtggggc  ccatggatgt  gcttggtaac  300
tgagtgcctt  ttggtggaga  ggcccggcct  ctcacaaaag  accccttmcc  actgctctga  360
tgaagaggag  tacacagaac  acataattca  ggaagcagct  ttcccatgt  ctcgactcat  420
ccatccaggc  cattccccgt  ctctggttcc  tccctcctc  ctggactcct  gcacacgctc  480
cttcctctga  ggctgaaatt

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<210> 61

<211> 499

<212> DNA

<213> Homo sapiens

<400> 61

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ttgggcccc  gaggtgggt  gacatgtgtt  ggcagcctct  tcaaaatgag  ccctgtcctg  60
cctaaggctg  aacttgtttt  ctgggaacac  cataggtcac  ctttattctg  gcagaggagg  120
gagcatcagt  gccctccagg  atagactttt  cccaagccta  cttttgccat  tgacttcttc  180
ccaagattca  atcccaggat  gtacaaggac  agccctcct  ccatagtatg  ggactggcct  240
ctgctgatcc  tcccaggctt  ccgtgtgggt  cagtggggcc  catggatgtg  cttgttaact  300
gagtgccttt  tgggtggagag  gcccggcctc  tcacaaaaga  ccccttmcca  ctgctctgat  360
gaagaggagt  acacagaaca  cataattcag  gaagcagctt  tcccatgtc  tcgactcatc  420
catccaggcc  attccccgtc  tctggttctc  cccctcctcc  tggactcctg  cacacgctcc  480
ttcctctgag  gctgaaatt

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<210> 62

<211> 498

<212> DNA

<213> Homo sapiens

<400> 62

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tgggccccag  aggctgggtg  acatgtgttg  gcagcctctt  caaaatgagc  cctgtcctgc  60
ctaaggctga  acttgttttc  tgggaacacc  ataggtcacc  tttattctgg  cagaggaggg  120
agcatcagt  ccctccagga  tagacttttc  ccaagcctac  ttttgccatt  gacttcttcc  180
caagattcaa  tcccaggatg  tacaaggaca  gcccctcctc  catagtatgg  gactgggctc  240
tgctgatcct  cccaggcttc  cgtgtgggtc  agtggggccc  atggatgtgc  ttgttaactg  300
agtgcctttt  ggtggagagg  cccggcctct  cacaaaagac  cccttmccac  tgctctgatg  360
aagaggagta  cacagaacac  ataattcagg  aagcagcttt  ccccatgtct  cgactcatcc  420
atccaggcca  ttccccgtct  ctggttcttc  cctcctcctc  ggactcctgc  acacgctcct  480
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<210> 63

<211> 498

<212> DNA

<213> Homo sapiens

<400> 63

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tgggccccag  aggctgggtg  acatgtgttg  gcagcctctt  caaaatgagc  cctgtcctgc  60
ctaaggctga  acttgttttc  tgggaacacc  ataggtcacc  tttattctgg  cagaggaggg  120
agcatcagt  ccctccagga  tagacttttc  ccaagcctac  ttttgccatt  gacttcttcc  180
caagattcaa  tcccaggatg  tacaaggaca  gcccctcctc  catagtatgg  gactggcctc  240
tgctgatcct  cccaggcttc  cgtgtgggtc  agtggggccc  atggatgtgc  ttgttaactg  300
agtgcctttt  ggtggagagg  cccggcctct  cacaaaagac  cccttmccac  tgctctgatg  360
aagaggagta  cacagaacac  ataattcagg  aagcagcttt  ccccatgtct  cgactcatcc  420
atccaggcca  ttccccgtct  ctggttcttc  cctcctcctc  ggactcctgc  acacgctcct  480
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<210> 64
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 <212> DNA
 <213> Homo sapiens

<400> 64
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 <211> 503
 <212> DNA
 <213> Homo sapiens

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 <211> 453
 <212> DNA
 <213> Homo sapiens

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<210> 67
 <211> 500
 <212> DNA
 <213> Homo sapiens

<400> 67
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